

J U N I P E R  
D E V E L O P M E N T G R O U P

Site: V/E 225 G/H  
Break: 11-12  
Other:

*Olympia Non*

November 3, 1987

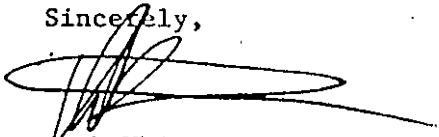
Louis N. Massery, Esq.  
Cooley, Manion, Moore & Jones  
530 Atlantic Avenue  
Boston, MA 02210

Dear Lou:

Enclosed please find copies of all bills, permits and correspondence relating to the history of the underground tanks at 60 Olympia which Linda Swarms has done an excellent job compiling. I have not sent any information to Barbara Newman or Rodine DeRice.

If you would like me to forward this material to them, I will on your instruction. Thanks very much.

Sincerely,

  
Chub Whitten

CW/jpm  
Enclosure



SEMS DocID

628451

Chronology of Underground Tanks at 60 Olympia Ave., Woburn

1. On May 19, 1983 property was purchased from Bankruptcy Court.
2. Copy of Tank Registration to Hemingway Tansport, Inc. for 1983.

3. Memo from Hemingway Transport listed underground tank:

- 1 - 6,380 gallon gas
- 2 - 5,000 gallon diesel
- 1 - 5,000 gallon fuel oil
- 1 - 1,000 gallon waste oil - no longer in use

4. July 1983 Craftsmen Construction removed the 6,380 gallon gasoline tank and one of the 5,000 gallon diesel tanks.

Craftsmen Construction installed a standard steel tank with the capacity of 6,280 gallons and a 5,000 gallon tank.

5. On February 13, 1987 Petro-Tite Tank Tester performed test on the two 5,000 gallon tanks. Tanks were reported as leaking.
6. On March 11, 1987 Petro-Tite Tank Tester performed test on the 6,280 gallon tank. Tank was reported as leaking.
7. On June 19, 1987 Craftsmen Construction replaced the 6,280 gallon tank with a 6,000 gallon 30 year steel tank, Serial #88303.

Craftsmen Construction installed two 5,000 gallon 30 year steel tanks, Serial #'s 92473 and 92470.



# The Commonwealth of Massachusetts

## Department of Public Safety—Division of Fire Prevention

ABOVEGROUND

1010 COMMONWEALTH AVE., BOSTON

UNDERGROUND

10-32½ lb. propane gas;

1-100 lb. acetelyne;

1-100 lb. oxygen

### REGISTRATION

1-6380 gal. gasoline;

2-5000 gal. diesel fuel;

1-5000 gal. #2 fuel oil;

1-1000 gal. waste oil.

.....WOBURN.....

(City or Town)

APRIL

19-9-83

This is to certify that.....HEMINGWAY TRANSPORT, INC.....has, in accordance with the provisions of Chapter 148, Section 13, of the General Laws, filed with me a certificate of registration setting forth that.....HEMINGWAY TRANSPORT, INC.....is the holder of the license granted .....6-6-63.....19..... for the lawful use of the building(s) or other structure(s) situated or to be situated at.....60 Olympia Ave., Woburn, Mass. ....  
(Street and Number)

as related to the KEEPING, STORAGE, MANUFACTURE OR SALE OF FLAMMABLES OR EXPLOSIVES.

.....  
(Signature and Official Title) CLYDE CLERK

Note: A certificate of registration must be filed on or before April 30th of each year.

(THIS REGISTRATION MUST BE CONSPICUOUSLY POSTED ON THE PREMISES.)

Arthur  
Shantel

Delivered 155,000 / yr new, old.  
Tapes 37, 920  
Gordon  
230 Park Ave. Hemingway Facility  
N.Y., N.Y.

Structure 1- 212-661-9800

- Built 1963, structural steel with masonry curtainwall, reinforced concrete foundation walls with long span steel joints.
- X Flat roof-built-up
- X Chimney is structural questionable
- X 8' x 10' doors on 10' centers
- 6' overhang-needs extensive work-ret lash & recoat with 3 ply paper
- X Original mechanical systems (HVAC)-original equipment has reached the end of its useful life but appears to still be completely operational. The air-conditioning has been maintained over the years on a semi-annual basis. Systems were not operational the day of inspection.
- More than adequate electrical distribution system and power.

Shop

- 5 bay shop, 3 are drive through
- No pit
- No operable lift (the one existing appears to be totally inoperable)
- No overhead crane (structural system would have to be modified to accept an overhead crane, 2 1/2 ton to 5 ton)
- Infrared heaters-operable day of visit (most of the reflector shield are showing signs of deterioration and corrective work may be needed)
- X Doors-chain assist with work needed on most
- Compressed air system-currently operating off same compressor as sprinkler system
- Waste oil drainage system appears to be non-operable, no explanation given by Hemingway personnel. Construction documents indicate existence of a 1,000 gallon waste oil tank adjacent to the shop with drains located in the shop area.
- X Numerous broken windows
- Shop office, 10 x 12 approx.
- Parts room, 10 x 16 approx.
- Difficult to thoroughly inspect this area due to excessible amount of equipment and generally poor house cleaning. Condition of air, water, oil, and grease lines should be carefully viewed due to near total absence of fittings and controls.

Storage capacity (fuels)

- 1-6,380 gallon gas
- 2-5,000 gallon diesel
- 1-5,000 gallon fuel oil
- 1-1,000 gallon waste oil-the vent has been out off low and has been filled with trash

11 638 6380  
5000  
11380

There are signs of oil and/or fuel leakage adjacent to the shop and it is highly recommended that these tanks be inspected and pursue tested.

X- Lighting appears to be adequate To Six and being to operational

Permits  
6386  
5000  
11380

**CRAFTSMEN  
CONSTRUCTION  
CORPORATION**

24 White Street (P. O. Box 540) Winchester, Mass. 01890

Telephone 729-4197, 729-4198

June 14, 1983

CRAFTSMEN  
for 32 Years  
1949 - 1981To: Juniper Development Group  
25 Waterfield Rd  
Winchester, MA 01890

Attention: George Whitten

Gentlemen:

CRAFTSMEN CONSTRUCTION CORPORATION proposes to do the following work at:

Hemingway Terminal, 60 Olympia Ave., Woburn, MA

*Description of the work:*

remove section of concrete apron over leaking tank; remove one 6280 gallon tank and dispose at an approved site; supply and install one new 6280 gallon, 72" diameter standard steel tank. All piping to be connected to this tank will be done in a manner similar to the connections on the original tank. The new tank will be set on the existing concrete anchor mat, if there is one presently, and backfilled using the same excavated material. When time has allowed for compaction, the concrete mat will be poured to existing grade.

Price, including new tank, installation on the anchor mat, and concrete mat over the tank top \$6,550.00

If there is no concrete anchor mat under this tank to hold it down, and the Woburn Fire Dept. should require the installation of one, we will pour an 8" wire re-inforced pad with hooks to anchor the tank.

Price 775.00

If de-watering of the excavation becomes necessary, we will establish a sump with trap rock and a pump for 24 hrs. to maintain the integrity of the excavation. We expect sand is the major backfill material in the area of the underground storage tanks.

Price 425.00

The tank presently has approxiamtaly 2000 gallons of water in it. This water cannot be pumped out into the ground or any storm drain, as it is considered by the Dept. of Environmental Quality Engineering to be a hazardous waste. For the proper disposal of the water 725.00

Material to be supplied by: Juniper Development - no material

Material to be supplied by CRAFTSMEN CONSTRUCTION CORPORATION:

all material required.

Juniper Development Group

June 14, 1983

It is unlikely that the soil has been contaminated. However, if it is determined that it is, the necessary steps and precautions may have to be taken, predicated on any decision by the Woburn Fire Dept. or the D.E.Q.E.

Price per ton of clean backfill material, if required; includes disposal of displaced excavated material -

Combined Truck In/Truck Out

\$16.75 per ton

CRAFTSMEN CONSTRUCTION CORPORATION

Thank you for calling.

INVOICE

# CRAFTSMEN CONSTRUCTION CORPORATION

- GENERAL CONTRACTORS
- SERVICE STATION
- INSTALLATIONS AND MAINTENANCE
- ELECTRICAL CONTRACTING

CRAFTSMEN  
for 35 Years  
1949 - 1984

4 WHITE STREET (P.O. BOX 548) • WINCHESTER, MASS. 01890 • PHONE 729-4197 • 729-4198

LD TO • Juniper Development  
25 Waterfield Road  
Winchester, MA 01890

October 19, 1983

OUR INV. No. C-987

LOCATION	YOUR ORDER NO.	TERMS:
United Truck, Olympia Ave., Woburn, MA		NET
To invoice for the fabricating of a vent manifold and the installation of the manifold on the risers at the above location.		
Labor	54 15	
Truck Expense	6 00	
Material	150 51	
Shop Labor	91 00	
Equipment Expense (welding & cutting equipment)		
APPROVAL <i>[Signature]</i> COMPANY <i>[Signature]</i> PROJECT <i>[Signature]</i> BY <i>[Signature]</i> GL ACCT. <i>[Signature]</i> AMOUNT <i>\$316.66</i> DUE DATE <i>11/29</i> DATE REC'D. <i>10/24</i> CHECK NO./DATE		\$316 56

CREDIT TERMS: BALANCES OVER 30 DAYS SUBJECT TO 1 1/2%  
MONTHLY FINANCE CHARGE (ANNUAL PERCENTAGE RATE 18%)

Thank you for calling.

INVOICE

# CRAFTSMEN CONSTRUCTION CORPORATION

- GENERAL CONTRACTORS
- SERVICE STATION
- INSTALLATIONS AND MAINTENANCE
- ELECTRICAL CONTRACTING

CRAFTSMEN  
for 35 Years  
1949 - 1984

24 WHITE STREET (P.O. BOX 548) • WINCHESTER, MASS. 01890 • PHONE 729-4197 • 729-4198

OLD TO • Juniper Development Group  
25 Waterfield Road  
Winchester, MA 01890

October 21, 1983

OUR INV. No. C-606-1

DATE	LOCATION	YOUR ORDER NO.	TERMS:
	Hemingway Terminal, 60 Olympia Ave., Woburn		NET
To invoice for the work on the tank installation through 10/15/83.			
A. Completion of paving and concrete work deleted from our first invoice			
As agreed			
B. Repair of the leaking suction line in the embankments including all equipment and repatching of the concrete. This leak only became apparant when the sump pump was put into use on this line.			
Labor	COMPANY <u>Juniper Corp</u>	644	48
Truck Expense	PROJECT <u>60 OLYMPIA AVE.</u>	59	50
Material	BY _____	47	26
Air Compressor Expense including jackhammer, hoses & tools	AMOUNT <u>\$1,981.24</u>	30	00
	DUE DATE <u>11/24</u>		
	DATE REC'D. <u>10/24</u>		
	CHECK NO./DATE <u>Total Invoice</u>		
Mass. Sales Tax paid on material			
			1,200 00
			781 24
			\$ 1,981 24

CREDIT TERMS: BALANCES OVER 30 DAYS SUBJECT TO 1 1/2% MONTHLY FINANCE CHARGE (ANNUAL PERCENTAGE RATE 18%)

GENERAL CONTRACTORS  
SERVICE STATION  
INSTALLATIONS  
AND MAINTENANCE  
ELECTRICAL CONTRACTING

WEAVER MANUFACTURING CO.  
Sales and Service

# CRAFTSMEN CONSTRUCTION CORPORATION

24 White Street (P. O. Box 548) Winchester, Mass. 01890

Telephone 729-4197, 729-4198

Our Inv. No. C-606

August 2, 1983

Terms NET

Juniper Development Group  
25 Waterfield Rd  
Winchester, MA 01890

Re: Hemingway Terminal, 60 Olympia Ave., Woburn, MA

To invoice for the work on the tank installations through 7/31/83.

A. Installation of 6,280 tank as described in our proposal of  
June 14, 1983.

As agreed

6,550.00

B. Supplying of a 5,000 gallon tank on site.

2,649.00

C. Normal installation of a 5,000 gallon tank including necessary  
piping, etc.

3,250.00

D. Installation of a concrete mat beneath the tank and the  
anchoring of the tank to the mat.

Labor	376.98
Truck Expense	40.25
Material	571.02
5/8 yd Backhoe w/operator expense	<u>116.25</u>

1,104.50

E. Additional concrete removal over 6,280 tank. We encountered  
12" of concrete instead of the normal 6" and expended the  
following in the removal of that concrete.

Labor & Vehicle Expense	126.25
Air Compressor expense including jackhammer, hoses & tools	<u>30.00</u>

156.25

8/11 J6331  
\$13,705.35

Terms of sale are net 30 days plus a 1 1/2% per month (corresponds to  
18% per year) service charge will be assessed on all balances over 60 days.

CRAFTSMEN Co. 12 Years 1970-1981

RECEIVED  
8/3

(R)  
Partial

Juniper Development Group

August 2, 1983

- F. We encountered water in both tank excavations which required our water pump on the site to pump out the holes. This water situation created caving conditions in the excavation and thus resulted in additional time on this installation. Our charges for this time are as follows.

Labor	229.60
Truck Expense	56.00
Water Pump Expense	140.00
5/8 yd Backhoe/expense	<u>620.00</u>

1,045.60

- G. The City of Woburn recently adopted a fee for tank removals and a fee for installations. This previously non-existent fee is \$50.00 per tank removal and \$50.00 per tank installed. This project had two installations and one removal.

Permit Expenses

150.00

Total all sections

\$14,905.35

Less the allowance for paving and concrete work not yet completed. That work will be invoiced at the time of its completion.

Total this partial invoice

(1,200.00)

\$13,705.35

8/11 331  
PA 13,705.35

13,705.35  
rec'd 8/4

1,200 to  
be reg'd billing  
upon

GENERAL CONTRACTORS  
SERVICE STATION  
INSTALLATIONS  
AND MAINTENANCE  
ELECTRICAL CONTRACTING

# CRAFTSMEN CONSTRUCTION CORPORATION

WEAVER MANUFACTURING CO.  
*Sales and Service*  
PETRO-TITE TANK AND LINE TESTING

24 White Street (P. O. Box 548) Winchester, Mass. 01890

Telephone 729-4197, 729-4198

June 29, 1987

Invoice No. G-675

Terms - Net

Juniper Development  
39 Holton Street  
Winchester, MA 01890

Re: United Truck, Olympia Ave., Woburn, MA

To invoice for the work performed through 6/19/87 at the above location.

1. New 6,000 gallon tank on site and set in place.
2. Area for the new 6,000 and two new 5,000 gallon tanks excavated.
3. Removed one 6,000 and two 5,000 gallon tanks. Tank cleaned, prepared for disposal and transported to an approved disposal site.
4. Stockpiled the contaminated fill that was excavated. Put fill on polyethylene and covered with polyethylene.
5. Excavated trench around contamination area and set perforated P.V.C. in place. Backfilled with new stone.

Labor	\$3,135.50
Vehicle Expense	576.00
Material	554.69
Hitachi Backhoe w/operator expense	4,000.00
Move Charge	240.00
Trojan Loader w/operator expense	2,150.00
Lowbed Trailer w/driver expense	780.00
Air Compressor expense including tools and air pump	90.00
Tank Disposal Expense	384.00
Pad Disposal, Pads & Dry Ice	162.10
Polyethylene	201.60
Permits	60.00
New Fill	3,800.20
New 6,000 stiP3 tank	4,375.75
Barrier Expense (thru 6/30/87)	198.54

Total this partial invoice

\$20,708.38

\*This invoice covers all charges for the period listed with the exception of the expense for the geologist. These will be charged upon receipt of this invoice.

Thank you for calling.

INVOICE

**CRAFTSMEN  
CONSTRUCTION  
CORPORATION**

- GENERAL CONTRACTORS
- SERVICE STATION
- INSTALLATIONS AND MAINTENANCE
- ELECTRICAL CONTRACTING
- PETRO-TITE TANK & LINE TESTING

CRAFTSMEN  
for 39 Years  
1948 - 1987

24 WHITE STREET (P.O. BOX 548) • WINCHESTER, MASS. 01890

PHONE ~~729-4197~~ • 729-4198

OLD TO • Juniper Development  
39 Holton St.  
Winchester, MA 01890

July 20, 1987

OUR INV. No. G-675-1

DATE	LOCATION	YOUR ORDER NO.		TERMS	
	<del>XXXX</del> United Truck, Olympia Ave., Woburn, MA			NET	
<p>To invoice for the supplying of two 5,000 gallon tanks, on site, ready for installation. Tank charts enclosed.</p> <p>Total this invoice</p>		\$7,394	00		
				\$7,394	00

CREDIT TERMS: BALANCES OVER 30 DAYS SUBJECT TO 1 1/2%  
MONTHLY FINANCE CHARGE (ANNUAL PERCENTAGE RATE 18%)

GENERAL CONTRACTORS  
SERVICE STATION  
INSTALLATIONS  
AND MAINTENANCE  
ELECTRICAL CONTRACTING

**CRAFTSMEN  
CONSTRUCTION  
CORPORATION**

WEAVER MANUFACTURING CO.  
*Sales and Service*  
PETRO-TITE TANK AND LINE TESTING

24 White Street (P. O. Box 548) Winchester, Mass 01890

Telephone 729-4197, 729-4198

Juniper Construction  
39 Holton Street  
Winchester, MA 01890

April 29, 1987

Invoice #G-189

Re: United Truck Lease, 60 Olympia Ave., Woburn, MA Terms: NET

To invoice for the following work performed on the dates as listed:

2-9-87

Working supervisor check site on preparation for testing of tank

2-12-87

Removed snow bank in front of the vent riser. Removed riser and swing joint; found no problems. Reassembled vent.

Uncovered the syphon that is the one to be disconnected for the tank test.

2-14-87

Broke the syphone line and capped same for Petro-tite tests.

Tested two tanks as described in the enclosed Petro-tite tank test reports.

2-20-87

Excavated to uncover the tank piping. Switched piping so pump would only be drawing off the good tank.

2-23-87

Excavated and uncovered the 6,000 gallon tank in preparation for the re-test of this diesel tank.

2-24-87

Tapped the hole for the test.

3-11-87

Disconnected the suction and vent lines. Retested tank. Copies of test report attached. Reconnected all piping after test.

continued on page 2

United Truck Lease

Invoice #G-189 cont.

4-11-87

Backfilled the tank area and transferred the product  
from one tank to another.

Labor	\$1,742.95
Truck & Trailer Expense	147.00
Material	114.48
Air Compressor Expense, including jackhammer, hoses & tools	135.00
Case Backhoe & Front-end Loader w/operator Expense	621.00
Steer Skid Loader Expense	96.00
Barrier Material Expense	60.00
Explosion-proof Pump Expense	15.00
Three Petro-tite tank tests @ 52500	<u>1, 575.00</u>

Total invoice

\$4,506.43

Enclosures

CRAFTSMEN CONSTRUCTION CORPORATION

14. **UNITED TRUCKING** **OLYMPIA AVE** **WOBBURN** **MA** **3-11-87**  
 Name of Supplier, Owner or Dealer Address No. and Street(s) City State Date of Test

15. TANK TO TEST

2<sup>ND</sup> TANK FROM TRAILER  
 Identity by position  
 DIESEL FUEL  
 Brand and Grade

16. CAPACITY

Nominal Capacity 6280  
 Gallons  
 Is there doubt as to True Capacity? ☐  
 See Section "DETERMINING TANK CAPACITY"

By most accurate  
 capacity chart available 6274  
 Gallons

From  
☐ Station Chart  
☐ Tank Manufacturer's Chart  
☐ Company Engineering Data  
☐ Charts supplied with Petro-Tite  
☐ Other

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 to 1/4 in. 0 Gallons

Stick Readings to 1/4 in. Gallons Total Gallons ea. Reading  
 Inventory FULL 6274

TOP OFF 8 6282

Fill up, STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

Tank Diameter 72"

Product in full tank (up to fill pipe)

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (25).

☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM

☐ Stage I  
☒ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to Grade\* 103"  
 Add 30" for 4" L 30"  
 Add 24" for 3" L or air seal       "  
 Total tubing to assemble Approximate 133"

20. EXTENSION HOSE SETTING

Tank top to grade\*       "  
 Extend hose on suction tube 6" or more  
 below tank top       "

\*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK

Is Today Warmer? ☐ Colder? ☐       ° F Product in Tank       ° F Fill-up Product on Truck       ° F Expected Change ( - or + )

22. Thermal-Sensor reading after circulation 04990 36-37° F  
 digits Nearest

23. Digits per °F in range of expected change 297  
 digits

24. 6282 × .00047560 = 2.9877192 gallons  
 total quantity in full tank (16 or 17) coefficient of expansion for involved product volume change in this tank per °F

25. 2.9877192 + 297 = .0100596 A = .0101  
 volume change per °F (24) Digits per °F in test Range (23) Volume change per digit. Compute to 4 decimal places. This is test factor (a)

26. LOG OF TEST PROCEDURES		29. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD TO .01 GAL.			34. TEMPERATURE COMPENSATION USE FACTOR (a)			38. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading in.	30. Standpipe Level in inches		32. Product in Graduate		35. Thermal Sensor Reading	36. Change Higher + Lower - (c)	37. Compensation (c) = (a) = Expansion + Contraction -	Temperature Adjustment Volume Minus Expansion (+) or Contraction (-) #33(V) - #37(T)	At High Level record Total End Difference  At Low Level compute Change per Hour (NTP criteria)
TIME (24 hr.)			Beginning of Reading	Level to which Restored	Before Reading	After Reading					

Petro-Tite  
 TANK TESTER

CONSULTANTS

100 TOSCA DRIVE  
 P.O. BOX C5-200  
 STOKTON, MA. 02072-1591  
 (617) 344-1400

[illegible]



14. UNITED TRUCKING OLYMPIA AVE WABURN MA 2-13-87  
 Name of Supplier, Owner or Dealer Address No. and Street(s) City State Date of Test

15. TANK TO TEST

2ND TANK FROM TRAILER  
 Identity by position

DIESEL FUEL  
 Brand and Grade

16. CAPACITY

Nominal Capacity 5000  
 Gallons

Is there doubt as to True Capacity? ☐  
 See Section "DETERMINING TANK CAPACITY"

By most accurate capacity chart available 5042  
 Gallons

From  
☐ Station Chart  
☐ Tank Manufacturer's Chart  
☐ Company Engineering Data  
☒ Charts supplied with Petro-Tite  
☐ Other

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 to 1/8 in. 0 Gallons

Stick Readings to 1/8 in. Gallons Total Gallons as Reading  
 Inventory Full 5042  
TOP OFF 23 5065

Fill up, STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

Tank Diameter 72

Product in full tank (up to fill pipe)

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (25).

☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM

☐ Stage I  
☐ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to Grade\* 103"  
 Add 30" for 4" L 30"  
 Add 24" for 3" L or air seal     "  
 Total tubing to assemble Approximate 133"

20. EXTENSION HOSE SETTING

Tank top to grade\*     "  
 Extend hose on suction tube 6" or more  
 below tank top 6"

\*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK

Is Today Warmer? ☐ Colder? ☐     ° F Product in Tank     ° F Fill-up Product on Truck     ° F Expected Change ( - or + )

22. Thermal-Sensor reading after circulation 046885 35-36° F  
 digits Nearest

23. Digits per °F in      expected change 292  
 digits

24. 5065 .00046975 = 2.3792837 gallons  
 total quantity in full tank (16 or 17) coefficient of expansion for involved product volume change in this tank per °F

25. 2.3792837 + 292 = .0081482 1.0081  
 volume change per °F (24) Digits per °F in test Range (23) Volume change per digit. Compute to 4 decimal places. This is test factor (a)

26. LOG OF TEST PROCEDURES			30. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD TO .001 GIL			34. TEMPERATURE COMPENSATION USE FACTOR (a)			38. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	Standpipe Level in inches		Product in Grade		Product Replaced (-)	35. Thermal Sensor Reading	36. Change Higher + Lower - (c)	37. Computation (c) x (a) = Expansion + Contraction -	Temperature Adjustment	At High Level record Total End Deduction
TIME (24 hr.)			Beginning of Reading	Level to which Restored	Before Reading	After Reading	Product Recovered (+)				Volume Minus Expansion (+) or Contraction (-) #33(V) - #37(T)	At Low Level compute Change per hour (NTPA criteria)

Petro-Tite  
 TANK TESTER

100 TOSCA DRIVE  
 P.O. BOX GS-200  
 STOUGHTON, MA. 02072-1591  
 (617) 344-1400

	TANK #1											
9:30	ARRIVE SITE TAKE TANK MEASUREMENTS SET UP EQUIPMENT AND STAGING RAISE STAND PIPE TO 68" AT THE 12" MARK PLUG AIR SEPARATORS IN PUMPS											
10:30	TOP OFF SYSTEM BLEED PLUGGED SYSTEM LINE, AIR SEPARATORS											
11:00	START CIRCULATION ABOVE 42"											
11:30	TAKE API SAMPLE 36.1 at 440 CONVERT TO 37.3 at 600											
12:00	DROP TO HIGH LEVEL 42" 42 600 4825 A = .003A											
12:15	START HIGH LEVEL TEST 1 42.1 42 600 .615 +.015 834 +9 +.073 -.058											
12:30	CONTINUE HIGH LEVEL TEST 2 42.1 42 615 .625 +.010 844 +10 +.081 -.071											
12:45	" " " " 3 42.0 42 .625 .625 +.000 854 +10 +.081 -.081											
13:00	" " " " 4 42.1 42 .625 .630 +.005 861 +7 +.057 -.052											
13:15	" " " " 5 42.1 42 .630 .640 +.010 870 +9 +.073 -.063											
13:30	" " " " 6 42.1 42 .640 .650 +.010 878 +8 +.064 -.054											
13:35	DROP TO LOW LEVEL 12" 12 .620 878											
13:50	START LOW LEVEL TEST 7 12.8 12 .620 .660 +.040 886 +8 +.064 -.024											
14:05	CONTINUE LOW LEVEL TEST 8 12.8 12 .660 .700 +.040 893 +7 +.057 -.015 -.017											
14:20	" " " " 9 12.9 12 .700 .750 +.050 890 +7 +.057 -.007 -.024											
14:35	" " " " 10 12.8 12 .750 .795 +.045 897 +7 +.057 -.012 -.036											
14:50	" " " " 11 12.8 12 .795 .845 +.050 904 +7 +.057 -.007 -.043											
14:55	TEST STOPPED SYSTEM TIGHT AT .043 G.P.H.											

petro tile  
TANK TESTER

CONSISTANTS

14. UNITED TRUCKING      OLYMPIA AVE      Woburn      MA      2-13-87  
Name of Supplier, Owner or Dealer      Address No. and Street(s)      City      State      Date of Test

15. TANK TO TEST

Tank #1 Closest to Trailer  
Identify by position

Diesel Fuel  
Brand and Grade

16. CAPACITY

Nominal Capacity 5000 Gallons

Is there doubt as to True Capacity? ☐  
See Section "DETERMINING TANK CAPACITY"

By most accurate capacity chart available 5042 Gallons

From

- ☐ Station Chart  
☐ Tank Manufacturer's Chart  
☐ Company Engineering Data  
☒ Charts supplied with petro tile  
☐ Other

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 to 1/2 in. 0 Gallons

Stick Readings to 1/2 in.	Gallons	Total Gallons ea. Reading
Inventory Full		5042
Top off 15		5057

Fill up, STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

Tank Diameter 72"

Product in full tank (up to fill pipe)

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

See manual sections applicable. Check below and record procedure in log (25).

- ☐ Water in tank    ☐ High water table in tank excavation    ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM

- ☐ Stage I  
☐ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to Grade\* 103"  
Add 30" for 4" L 30"  
Add 24" for 3" L or air seal "  
Total tubing to assemble Approximate 133"

20. EXTENSION HOSE SETTING

Tank top to grade\* 38"  
Extend hose on suction tube 6" or more below tank top 6"

\*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK

Is Today Warmer? ☐ Colder? ☐ °F Product in Tank °F Fill-up Product on Truck °F Expected Change (- or -)

22. Thermal-Sensor reading after circulation 04825 35-36 °F  
digits Nearest

23. °F in range of expected change 292  
digits

24. 5057 total quantity full tank (16 or 17) × .00046885 coefficient of expansion for involved product = 2,3709744 gallons  
volume change in this tank per °F

25. 2,3709744 volume change per °F (24) + 292 Digits per °F in test Range (23) = .0081197 This is test factor (a)  
Compute to 4 decimal places.

26. LOG OF TEST PROCEDURES		29.	30. HYDROSTATIC PRESSURE CONTROL	31. VOLUME MEASUREMENTS (a) RECORD TO .001 GIL.			34. TEMPERATURE COMPENSATION USE FACTOR (a)			38. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE	28. Record details of setting up and running test. (Use full length of line if needed.)	Reading in.	Standpipe Level in inches	Product in Grooves	Product Replaced (-)	Product Recovered (+)	Thermal Sensor Reading	36. Change Higher + Lower - (c)	37. Computation (c) × (a) = Expansion + Contraction -	Temperature Adjustment	At High Level record Total End Collectors
TIME (24 hr.)		Beginning of Reading	Level to which Restored	Before Reading	After Reading					Volume Minus Expansion (+) or Contraction (-) ÷ 33(V) - ÷ 37(T)	At Low Level compute Change per Hour (DTPH criteria)

100 TOSCA DRIVE  
P.O. BOX 65-700  
BOSTON, MA 02072-1591

# Data Chart for Tank System Tightness Test

**petrofile**

TANK TESTER

PLEASE PRINT

1. OWNER <small>Property</small> <input checked="" type="checkbox"/>  <small>Tank(s)</small> <input checked="" type="checkbox"/>	Juniper Development, 39 Holton St., Winchester					
	<small>Name</small>		<small>Address</small>		<small>Representative</small>	<small>Telephone</small>
	<small>Name</small>		<small>Address</small>		<small>Representative</small>	<small>Telephone</small>
2. OPERATOR	United Truck Lease, 60 Olympia Ave., Woburn					
	<small>Name</small>		<small>Address</small>		<small>Telephone</small>	
3. REASON FOR TEST (Explain Fully)	Customer request					
4. WHO REQUESTED TEST AND WHEN	Linda LaPointe		Secretary		Juniper Construction	
	<small>Name</small>		<small>Title</small>		<small>Company or Affiliation</small>	
	39 Holton St.		Winchester		MA 01890	
	<small>Address</small>		<small>Address</small>		<small>Telephone</small>	
5. WHO IS PAYING FOR THIS TEST?	Juniper Development,		Linda LaPointe		Secretary 729-0785	
	<small>Agency or Individual</small>		<small>Person Authorizing</small>		<small>Title</small>	
	39 Holton St.,		Winchester		MA 01890	
	<small>Billing Address</small>		<small>City</small>		<small>State</small> <small>Zip</small>	
	<small>Attention of:</small>		<small>Order No.</small>		<small>Other Instructions</small>	
6. TANK(S) INVOLVED	<small>Identify by Direction</small>	<small>Capacity</small>	<small>Brand/Supplier</small>	<small>Grade</small>	<small>Approx. Age</small>	<small>Steel/Fiberglass</small>
	Tank #1	5,000		Diesel	5 1/4	steel
	Tank #2	5,000		Diesel	15+ 2/4	steel
7. INSTALLATION DATA	<small>Location</small>	<small>Cover</small>	<small>Fills</small>	<small>Vents</small>	<small>Siphones</small>	<small>Pumps</small>
	Closest to trailer	concrete	4"	2"	2"	---
	2d fr trailer	"	4"	2"	2"	2 suction
	<small>North inside driveway, Rear of station, etc.</small>	<small>Concrete, Black top, Earth, etc.</small>	<small>Size, Thread make, Drop tubes, Remote Fills</small>	<small>Size, Manifolded</small>	<small>Which tanks?</small>	<small>Suction, Remote, Make known</small>
8. UNDERGROUND WATER	Depth to the Water table 67"					Is the water over the tank? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
9. FILL-UP ARRANGEMENTS	Tanks to be filled _____ hr. _____ Date _____ Arranged by _____					<small>Name</small> <small>Telephone</small>
	Extra product to "top off" and run TSIT. How and who to provide? Consider NO Lead.					
	Terminal or other contact for notice or inquiry _____					<small>Name</small> <small>Telephone</small>
	<small>Company</small>					<small>Name</small> <small>Telephone</small>
10. CONTRACTOR, MECHANICS, any other contractor involved						
11. OTHER INFORMATION OR REMARKS						
	Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test etc.					
12. TEST RESULTS	Tests were made on the above tank systems in accordance with test procedures prescribed for <b>petrofile</b> as detailed on attached test charts with results as follows:					
	<small>Tank Identification</small>	<small>Tight</small>	<small>Leakage Indicated</small>		<small>Date Tested</small>	
	Tank #1	-.043			2-13-87	
	Tank #2		-.122		2-13-87	
13. CERTIFICATION	This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.					
	2-13-87		Thomas Harris		Craftsmen Construction Corp.	
	<small>Date</small>		<small>Technician</small>		<small>Testing Contractor or Company</small> <small>By: Signature</small>	
	999 + 1024				24 White St., Winchester, MA 01890	
	<small>Serial No. of Thermal Sensor</small>				<small>Address</small>	